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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,276	07/12/2001	Hans-Egon Brock	70208	2061

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
1775	7

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/904,276	BROCK, HANS-EGON
	Examiner John J. Zimmerman	Art Unit 1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 February 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 5-19 is/are pending in the application.

4a) Of the above claim(s) 11-19 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 5-10 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

SECOND OFFICE ACTION

Election/Restrictions

1. Applicant's amendment received February 25, 2003 has added new claims 8-19. Claims 1-4 have been cancelled and claims 5-19 are pending in this application. Currently, claims 5-10 belong to elected Group II and claims 11-19 belong to non-elected Group I. Therefore, claims 11-19 are withdrawn from consideration in this prosecution as being drawn to a non-elected invention. The requirement was made FINAL in the Office Action of Paper No. 5, mailed November 25, 2002.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Applicant's amendment to independent claim 5 has added "predetermined" on line 2 and line 5. The usage of "predetermined" only indicates that the rhomboidal shape and cross section are determined beforehand. The use of "predetermined", however, has been held to be indefinite in a claim where it simply means determined beforehand, *Joseph E. Seagram & Sons, Inc. v.*

Marzall, Comr. Pats., 84 USPQ 180 (Court of Appeals, District of Columbia). In addition, in an article claim, it is indefinite as to how one can determine whether a rhomboidal shape and a cross section were "predetermined" or not since the thought process of the person manufacturing the article is not part of the article. The claims are further indefinite since it is not known what rhomboidal shape is "predetermined" and what cross section is "predetermined" in these claims. Deletion of "predetermined" will overcome this rejection.

5. Claims 5-10 are indefinite since these article claims relate the current dimensions and cross section of the claimed blank to the finished dimensions of a blade that will be made at some future point in time. It is not clear how the "oversize" dimensions of a blank can be determined since these dimensions can vary depending on the amount of material one is willing to remove from the blank in creating a finished blade, the quality of the blank surface, the materials of the blank, the acceptable tolerances of a particular blade application and what type of blade would be made from the blank. It is unclear how the dimensions of the blank in the claims can be interpreted relative to the unknown dimensions of a future blade to be made from the blank. Applicant is simply claiming a blank that has an *intended use* for manufacturing a rhomboidal blade for axial turbine engines.

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Vaganov (SU 617144A).

9. Vaganov discloses making rhomboid cross section blanks to manufacture turbine blades (e.g. see description of blade making in the included translation, pages 1-6). Vaganov discloses various working steps including hot rolling and roll machining. Regarding applicant's process language reciting hot forming steps and future machining steps in these article claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. In particular, it should be noted that since the recited machining steps have not yet been performed on the blank they are not considered to have any effect on the claimed physical structure of the blank. Regarding claim recitations to specific "oversize" dimensions (e.g. claim 6 and 7), for the purposes of this rejection it is the examiner's position that a blade can certainly be machined from the prior art rhomboidal blank within the tolerances of the claimed "oversize" limitations and therefore the rhomboidal blank of SU 617144 meets all the physical and

dimensional limitations required in the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

10. Claims 5-10 are rejected under 35 U.S.C. 102(b) as anticipated by David (U.S. Patent 5,733,080).

11. David discloses that the use of turbine blade blanks of parallelogram-shaped cross sections are known in the prior art (e.g. see column 1, lines 42-46). Although it is noted that applicant's claims recite a "rhomboidal shape", it should be noted that rhomboidal shapes are covered by parallelograms and therefore are anticipated by the teachings of David. It would be understood by one of ordinary skill in the art at the time the invention was made that rhomboids are taught with sufficient specificity by David since they are parallelograms and David teaches that blanks in the form of parallelograms are known in the prior art. Regarding applicant's process language reciting hot forming steps and future machining steps in these article claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. In particular, it should be noted that since the recited machining steps have not yet been performed on the blank they are not considered to have any effect on the claimed

physical structure of the blank. Regarding claim recitations to specific "oversize" dimensions (e.g. claim 6 and 7), for the purposes of this rejection it is the examiner's position that a blade can certainly be machined from the prior art blank within the tolerances of the claimed "oversize" limitations and therefore the prior art blank meets all the physical and dimensional limitations required in the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

12. Claims 5-10 are rejected under 35 U.S.C. 103(a) as obvious over David (U.S. Patent 5,733,080) in view of applicant' admitted prior art (e.g. first paragraph on page 2 of the specification).

13. David discloses that the use of turbine blade blanks of parallelogram-shaped cross sections are known in the prior art (e.g. see column 1, lines 42-46). David may differ from the claims in that David recites the use of parallelogram shaped blanks and applicant's claims recite a "rhomboidal shape". It should be noted, however, that rhomboidal shapes are covered by parallelograms and therefore rhomboidal shapes are clearly covered by the teachings of David. In any event, applicant clearly discloses that rhomboidal shaped footings are conventionally used for turbine blades in the prior art (e.g. see first paragraph on page 2 of the specification) and therefore it would have been obvious to one of ordinary skill in the art at the time the invention

was made to use rhomboidal parallelograms for the prior art blanks of David because rhomboidal shaped blanks more closely match the form of the prior art blades and therefore would be understood to be easier to manufacture blades from. Regarding applicant's process language reciting hot forming steps and future machining steps in these article claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. In particular, it should be noted that since the recited machining steps have not yet been performed on the blank they are not considered to have any effect on the claimed physical structure of the blank. Regarding claim recitations to specific "oversize" dimensions (e.g. claim 6 and 7), for the purposes of this rejection it is the examiner's position that a blade can certainly be machined from the prior art blank within the tolerances of the claimed "oversize" limitations and therefore the prior art blank meets all the physical and dimensional limitations required in the claims. In any event, it would have been obvious to one of ordinary skill in the art to make the prior art parallelogram shaped blanks disclosed by David no larger than would be necessary to ensure adequate tolerances for manufacturing a desired blade configuration because excess material would be understood to increase both machining and material costs. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Regarding the use of applicant's admitted prior art in this rejection, it is axiomatic that

consideration of the prior art cited by the examiner must, of necessity, include consideration of the admitted state of the art found in applicant's specification, *In re Davis*, 305 F.2d 501, 134 USPQ 256 (CCPA 1962); *In re Hedges*, 783 F.2d 1038, 228 USPQ 685 (Fed. Cir. 1986).

Admitted knowledge in the prior art may be used in determining patentability of the claimed subject matter, *In re Nomiya*, 509 F.2d 566, 184 USPQ 607 (CCPA 1975).

14. Claims 5-10 are rejected under 35 U.S.C. 102(b) as anticipated by Sejournet (U.S. Patent 2,975,509).

15. Sejournet discloses the use of turbine blade blanks of parallelogram-shaped cross sections (e.g. see column 2, lines 33-40). Although it is noted that applicant's claims recite a "rhomboidal shape", it should be noted that rhomboidal shapes are covered by parallelograms and therefore are anticipated by the teachings of Sejournet. It would be understood by one of ordinary skill in the art at the time the invention was made that rhomboids are taught with sufficient specificity by Sejournet since they are parallelograms and Sejournet teaches that blanks in the form of parallelograms can be used. In addition, the figure of Sejournet clearly shows that blades would be expected to have roots with unequal adjacent sides (e.g. a rhomboidal shape when the blank is a parallelogram). Regarding applicant's process language reciting hot forming steps and future machining steps in these article claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. In particular, it should be noted that

since the recited machining steps have not yet been performed on the blank they are not considered to have any effect on the claimed physical structure of the blank. Regarding claim recitations to specific "oversize" dimensions (e.g. claim 6 and 7), for the purposes of this rejection it is the examiner's position that a blade can certainly be machined from the prior art blank within the tolerances of the claimed "oversize" limitations and therefore the prior art blank meets all the physical and dimensional limitations required in the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Response to Arguments

16. The applicant's arguments in the response received February 25, 2003 have been carefully considered but do not overcome the pending rejections.

17. Applicant's amendment to independent claim 5 has added "predetermined" on line 2 and line 5. The usage of "predetermined" only indicates that the rhomboidal shape and cross section are determined beforehand. The use of "predetermined", however, has been held to be indefinite in a claim where it simply means determined beforehand, *Joseph E. Seagram & Sons, Inc. v. Marzall, Comr. Pats.*, 84 USPQ 180 (Court of Appeals, District of Columbia). In addition, in an article claim, it is indefinite as to how one can determine whether a rhomboidal shape and a cross

section were "predetermined" or not since the thought process of the person manufacturing the article is not part of the article. The claims are further indefinite since it is not known what rhomboidal shape is "predetermined" and what cross section is "predetermined" in these claims. It is not clear how this limitation necessarily defines the physical dimensions of the claimed article over any of the rhomboidal articles described in the applied references. Applicant states that "shapes and cross-sections of blades are almost always predetermined before the actual blade is formed from a blank" and therefore it is not clear how this limitation is intended to overcome the prior art that is specifically directed to making blades. Indeed, it would be hard to comprehend that a manufacturer would not predetermine the intended shape and intended cross section of a blade before setting forth to manufacture it. The examiner requests clarification on how the applicant intends to determine whether the shapes and cross-sections of blades in the prior art (or blades of an infringer) were "predetermined" or not.

18. Claims 5-10 remain indefinite since these article claims relate the current dimensions and cross section of the claimed blank to the finished dimensions of a blade that will be made at some future point in time. As noted above, it is not clear how the "oversize" dimensions of a blank can be determined since these dimensions can vary depending on the amount of material one is willing to remove from the blank in creating a finished blade, the quality of the blank surface, the materials of the blank, the acceptable tolerances of a particular blade application and what type of blade would be made from the blank. It is unclear how the dimensions of the blank in the claims can be interpreted relative to the unknown dimensions of a future blade to be made from the blank. Applicant is simply claiming a blank that has an *intended use* for manufacturing

a rhomboidal blade for axial turbine engines. In response to this rejection, applicant argues that in the art, "the amount of oversize, depends on the machine used to work the blank, and occasionally the skill of the operator operating the machine". Applicant further states that a "minimum oversize for machining is a known quantity for a machining process" and therefore "a person of ordinary skill in the art of machining would know the minimum oversize". In response to applicant's arguments, the examiner notes that no particular machining process or level of skill of operator is claimed or disclosed and therefore it is indefinite as to what the oversize would necessarily be in the claims. Applicant's arguments on this issue provide no factual evidence that the minimum oversize would be a set and understood dimension associated with the blank.

19. Regarding the prior rejection of the claims under 35 U.S.C. 102(b) as being anticipated by published Derwent abstract for SU 617144A, a copy of the actual published document has subsequently been obtained. In addition, a translation of the document from the translations branch of the U.S. Patent Office has been obtained. The rejection using the Derwent abstract has now been changed to a rejection using the published document SU 617144A to the inventor Vaganov. In view of this change in the rejection, this Office Action has not been made Final. As noted in the rejection applying the Vaganov publication, various working steps to the rhomboidal cross section blank are clearly described in the reference.

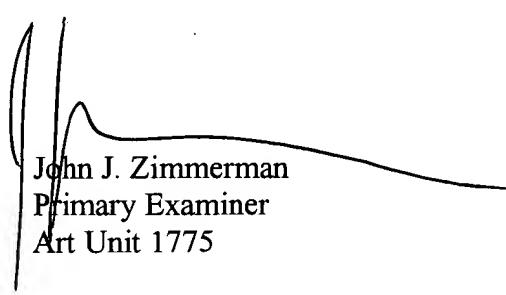
20. In response to the examiner's position in the rejections that applicant has not established that the claimed process language in the rejected article claims distinguish over the applied art, applicant argues that the process by which the blanks have been manufactured (e.g. hot forming)

results in “different characteristics” and “different structure” than blanks formed by other methods. Applicant has offered to provide an affidavit attesting these assertions. The examiner would be willing to consider such an affidavit, but cautions applicant that the information should be factual and *must be commensurate* with the claim limitations in order to be convincing. Since the pending claims, however, do not require that the blank is hot formed, hot rolled, drop forged, press forged or precision forged to any particular reductions or at any particular temperatures, and also since no particular materials are claimed, it is not clear whether any particular “different characteristics” and “different structure” can be said to be necessarily inherent to the claim language.

21. Regarding the rejection applying David (U.S. Patent 5,733,080), applicant argues that a rhomboidal shape is a species within parallelogram shaped cross sections and a genus does not necessarily teach a species within that genus. In response to applicant’s argument, the examiner reiterates that there is *sufficient specificity* in David’s disclosure to anticipate the claims since the number of species of named shapes within genus of parallelograms is so small that one of ordinary skill in the art at the time the invention was made would clearly envision all species within it. Applicant’s analysis of whether a genus can anticipate a species is directed mainly to situations wherein a genus may contain a large number of species. On this issue, applicant is directed to *In re Petering and Fall*, 133 USPQ 275, 280 (CCPA 1962).

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
April 14, 2003